

Kennedy/Jenks Consultants

Engineers & Scientists

32001 32nd Avenue South
Suite 100
Federal Way, Washington 98001
253-874-0555 (Seattle)
253-927-8688 (Tacoma)
FAX 253-952-3435

16 January 2003

Mr. Mark Burley
Joseph Simon & Sons
2200 East River Street
Tacoma, Washington 98420

Subject: Quarterly Monitoring Report
Joseph Simon & Sons Site
1601 Taylor Way, Tacoma, Washington
K/J 986054.00

Dear Mr. Burley:

This report summarizes the results of quarterly infiltration basin and Seep #1 discharge monitoring performed between December 2001 and August 2002 at the Joseph Simon & Sons property (site) located at 1601 Taylor Way, Tacoma, Washington.

PROJECT BACKGROUND

As part of a Remedial Action (RA) performed at the site in August through October 1999, an infiltration basin was installed adjacent to the Hylebos Waterway. In accordance with the Agreed Order and Cleanup Action Plan (Ecology 1998), discharge from the infiltration basin was monitored on a quarterly basis, with the fourth and final monitoring event completed in April 2001. The Agreed Order also required quarterly sampling of any seeps identified on the shoreline perimeter of the site. One seep (designated Seep #1) was identified and sampled in April 2001.

During the four quarterly monitoring events, total and dissolved copper were detected at concentrations above the established site cleanup standard of 3.1 micrograms per liter ($\mu\text{g/l}$) in the samples collected from the infiltration basin discharge. In addition, total and dissolved copper and lead were detected at concentrations above the site cleanup standards of 3.1 and 8.1 $\mu\text{g/l}$, respectively, in the sample collected from Seep #1. Previous analytical results are summarized in Table 1.

Based on the findings of the four quarterly monitoring events, Ecology issued a letter dated 12 October 2001 requesting additional discharge monitoring (a copy of the letter is provided in Attachment A). The requested additional monitoring included two quarters of infiltration basin discharge monitoring to be performed during periods of active infiltration (i.e., during or immediately after rain events) and three quarters of monitoring Seep #1 at low tide conditions. Ecology requested analyses of the infiltration basin discharge for total and dissolved copper, and of the Seep #1 discharge for total and dissolved lead and copper. This report summarizes the additional infiltration basin and Seep #1 monitoring events.

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FIELD ACTIVITIES

Infiltration Basin Sampling and Seep Sampling

Surface water samples were collected from the discharge location of the infiltration basin during or shortly after rain events on 18 December 2001 and 19 February 2002. The discharge point was located in the approximate center of the infiltration basin structure (refer to Figure 1). Because rainfall events did not correspond with tides sufficiently low to sample Seep #1, the infiltration basin discharge and Seep #1 discharge were sampled at different times.

Seep #1 was identified and surface water discharge samples were collected on 26 April 2002, 14 June 2002, and 20 August 2002. Seep #1 was located north of the discharge point of the infiltration basin structure at an approximate elevation of 0 feet mean sea level (MSL) (refer to Figure 1).

Surface water samples were collected by directly filling laboratory-prepared sample containers appropriate for each analysis to be performed. Preservatives provided by the analytical laboratory were used where appropriate. Dissolved metals samples were field-filtered using a 0.45-micron filter.

Surface water samples were submitted to Spectra Laboratories of Tacoma, Washington for the following analyses:

- Total and dissolved copper by EPA Method 220.2
- Total and dissolved lead by EPA Method 239.2.

SUMMARY OF FINDINGS

Analytical results for infiltration basin and Seep #1 discharge sampling and site cleanup standards are summarized in Table 1. Where applicable, practical quantitation limits (PQLs) are also included in Table 1. Analytical reports and chain-of-custody documents are included in Attachment B.

Infiltration Basin Discharge

Analytical results for infiltration basin discharge sampling are summarized below:

- Total copper was detected at concentrations of 4 and 13 µg/l, above the site cleanup standard of 3.1 µg/l.
- Dissolved copper was not detected at a concentration above the laboratory limit of 1 µg/l during the December 2001 monitoring event, and was detected at a concentration of 3 µg/l during the February 2002 monitoring event. These concentrations are below the site cleanup standard of 3.1 µg/l.

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Seep #1 Discharge

Analytical results for Seep #1 discharge sampling are summarized below:

- Total copper was detected at concentrations of 3 and 12 µg/l during the June 2002 and August 2002 sampling events, respectively, but was not detected at a concentration above the laboratory reporting limit of 1 µg/l during the April 2002 monitoring event. The total copper concentration of 12 µg/l detected during the August 2002 monitoring event exceeds the site cleanup standard of 3.1 µg/l.
- Dissolved copper was not detected at concentrations above the laboratory limit of 1 µg/l during any of the three monitoring events.
- Total lead was not detected at concentrations above the laboratory reporting limit of 1 µg/l during the April 2002 and June 2002 monitoring events. During the August 2002 monitoring event, total lead was detected at a concentration of 4 µg/l, below the site cleanup standard of 8.1 µg/l.
- Dissolved lead was not detected at concentrations above the laboratory reporting limit of 1 µg/l during the April 2002 and June 2002 monitoring events, but was detected at a concentration of 1 µg/l (below the site cleanup standard of 8.1 µg/l) during the August 2002 monitoring event.

SUMMARY AND CONCLUSIONS

Total copper concentrations detected in the infiltration basin discharge samples are within the range of those detected during the initial four quarterly monitoring events, and are slightly above the site cleanup standard of 3.1 µg/l. However, dissolved copper concentrations are generally lower than those detected during the previous monitoring events and are consistently below the site cleanup standard of 3.1 µg/l.

Total copper and lead concentrations detected in the samples collected from Seep #1 are lower than those detected during the previous monitoring event (April 2001). Total lead concentrations did not exceed the site cleanup standard of 8.1 µg/l, and the total copper concentration exceeded the site cleanup standard of 3.1 µg/l only in the sample collected in August 2002 (12 µg/l). Dissolved copper was not detected in Seep #1 at a concentration above the laboratory reporting limit of 1 µg/l, and dissolved lead was detected only in the Seep #1 sample collected in August 2002 at a concentration of 1 µg/l, below the site cleanup standard of 8.1 µg/l.

Total copper was detected in infiltration basin and Seep #1 discharge samples at concentrations slightly above the site cleanup standard; however, dissolved copper was not detected, or was detected at concentrations below the site cleanup standard, in samples collected at the same time and then field filtered. Dissolved copper is more representative than total copper of surface water discharge conditions from the site because copper-containing particulate matter appears

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to have been entrained in the sample and removed by the field filtration. Due to the sampling technique (grab samples from flowing surface water) collection of samples without entrained sediments is not practicable. Based on the findings of this study, it appears that cleanup standards established for the site have been achieved. Consequently, it does not appear that additional monitoring is warranted for the infiltration basin or Seep #1 discharges.

Kennedy/Jenks Consultants appreciates the opportunity to provide consulting services to Joseph Simon & Sons on this project. If you have any questions regarding the information presented in this report, please call us at (253) 874-0555.

Very truly yours,

KENNEDY/JENKS CONSULTANTS



Dean K. Malte
Senior Staff Geologist



Ty C. Schreiner
Project Manager

Attachments

cc: Ms. Joyce Mercuri, Washington State Department of Ecology
Mr. Guy Sternal, Eisenhower & Carlson

References:

Washington State Department of Ecology. 1998. Agreed Order No. 98TC-S213 and Cleanup Action Plan, Joseph Simon & Sons 1601 Taylor Way Site. Washington Department of Ecology, Toxics Cleanup Program, Olympia, Washington.

Table

TABLE 1

INFILTRATION BASIN AND SEEP ANALYTICAL RESULTS
Joseph Simon & Sons -- 1601 Taylor Way, Tacoma, Washington

Analyte	Date Sampled										Cleanup Standards ^(a)
	Infiltration Basin					Seep 1					
	12/28/99	4/8/00	1/30/01	4/26/01	12/18/01	2/19/02	4/27/01	4/26/02	6/14/02	8/20/02	
Total Metals (ug/l)											
Arsenic	<1.0 ^(b)	3	<5	3			10				36
Copper	2	5	63	5.4	4	13	29.7	<1	3	12	3.1 (10) ^(c)
Lead	1	2	<1	<5			14	<1	<1	4	8.1 (10) ^(c)
Mercury	<0.1	<0.1	<0.2	<0.1			<0.1				0.025 (2) ^(c)
Zinc	23	26	17	10			46				81
Dissolved Metals (ug/l)											
Arsenic	<1.0	<1.0	<5	1.3			<2				36
Copper	<2.0	14	57	6.8	<1	3	3.7	<1	<1	<1	3.1 (10) ^(c)
Lead	<1.0	<1.0	<1	<5			<5	<1	<1	1	8.1 (10) ^(c)
Mercury	<0.1	<0.1	<0.2	<0.1			<0.1				0.025 (2) ^(c)
Zinc	20	14	<6	12			7				81
Petroleum Hydrocarbons (ug/l)											
Gasoline Range	<250	<250	<50	<250			<250				1,000
Diesel Range	<250	<250	<250	280			<250				10,000
Heavy Oil Range	<500	<250	<1000	4,000			800				10,000
PCBs (ug/l)											
Aroclor 1016	<1.0	<0.1	---	<0.1			<0.1				0.030 (0.1) ^(c)
Aroclor 1232	<1.0	<0.1	<0.1	<0.1			<0.1				0.030 (0.1) ^(c)
Aroclor 1242	<1.0	<0.1	<0.1	<0.1			<0.1				0.030 (0.1) ^(c)
Aroclor 1248	<1.0	<0.1	<0.1	<0.1			<0.1				0.030 (0.1) ^(c)
Aroclor 1254	<1.0	<0.1	<0.1	<0.1			<0.1				0.030 (0.1) ^(c)
Aroclor 1260	<1.0	<0.1	<0.1	<0.1			<0.1				0.030 (0.1) ^(c)
Aroclor 1262			<0.1	<0.1							0.030 (0.1) ^(c)
Aroclor 1268			<0.1								0.030 (0.1) ^(c)
Other Analytes (ug/l)											
Bis(2-ethylhexyl)phthalate	<1.0	<1.0	<5	<1.0			<1.0				5.9 (10) ^(c)
Benzene	<1.0	<1.0	<1	<1.0			<1.0				0.071 (2) ^(c)
Ethylbenzene	<1.0	<1.0	<1	<1.0			<1.0				200
Toluene	<1.0	<1.0	<1	<1.0			<1.0				29
Total Xylene	<2.0	<2.0	<2	<2.0			<2.0				20

Notes:

(a) Surface water standards for TPH-Diesel and TPH-Heavy Oil are based on Ecology Model NPDES Permit for surface water discharges from Leaking Underground Storage Tank cleanup sites. Standards for benzene, toluene, and ethylbenzene are based on the EPA "National Toxics Rule" water quality criteria for human health protection. The xylene and TPH-Gasoline standards are based on the Model Toxics Control Act, WAC 173-340-720.

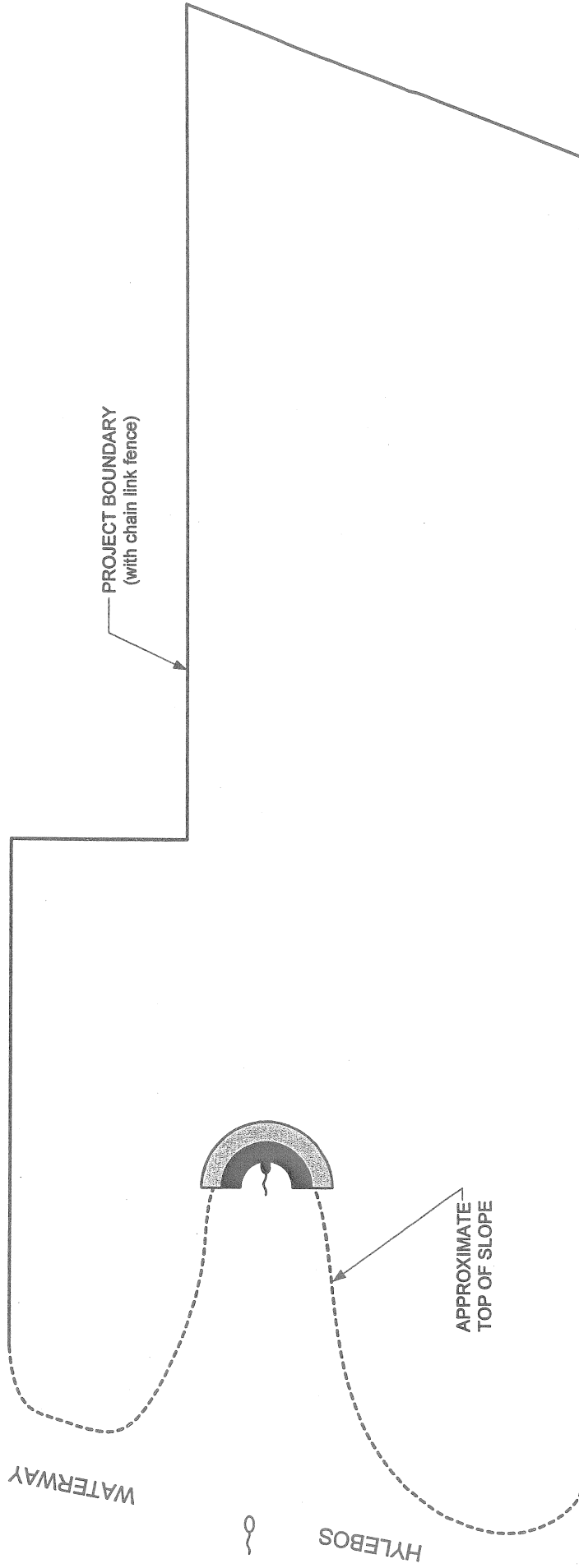
(b) "<" denotes that the analyte was not detected at the indicated laboratory detection limit.

(c) Practical Quantitation Limit (PQL) indicated in parentheses. Ecology recognizes that the PQL may be higher than the cleanup standard for a given parameter. In these cases, the cleanup standard may be considered to be attained if the parameter is undetected at the PQL and the conditions outlined in WAC 173-340-707 are met.




(d) "—" denotes that analysis of the indicated analyte was not performed.

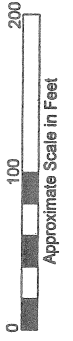
Bold and Italics indicate an analyte concentration above the indicated cleanup level

Figure



LEGEND:

-  Approximate infiltration basin discharge point and water sampling location
-  Approximate Seep #1 location
-  Infiltration basin location. Outline includes berm area (inner arc) and infiltration sand area (outer arc)



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JOSEPH SIMON AND SONS
 TACOMA, WASHINGTON

**INFILTRATION BASIN RUNOFF
 SAMPLING MAP**

986054.00/BASIN2.VSD

FIGURE 1

Appendix A

Ecology Letter 12 October 2001



STATE OF WASHINGTON
DEPARTMENT OF ECOLOGY

P.O. Box 47775 • Olympia, Washington 98504-7775 • (360) 407-6300

October 12, 2001

Mr. Ty Schreiner, Project Manager
Kennedy Jenks Consultants
530 South 336th Street
Federal Way, WA 98003



Your address
is in the
Duwamish-
Green
watershed

Dear Mr. Schreiner:

Re: Simon & Sons, 1601 Taylor Way

In our telephone conversation recently we discussed the infiltration basin and seep monitoring data for the Simon & Sons site at 1601 Taylor Way in Tacoma, and the possibility of de-listing the site from the Department of Ecology's Hazardous Sites List. At this time, it is not possible to de-list the site due to residual copper (and possibly lead) in water discharging from the site. In particular, the January 2001 sample event contained total and dissolved copper quite a bit higher than what would be expected for background levels. Also, the Cleanup Action Plan for the site required four quarters of monitoring for the seep, which has only been sampled once.

Therefore, I request that Simon & Sons conduct additional sampling at the 1601 Taylor Way site as follows:


Infiltration Basin: Collect samples of water from the infiltration basin for two additional quarters. The samples should be collected during conditions of active infiltration (during or immediately after rain events). The samples should be analyzed for total and dissolved copper. Reporting limits should be low enough to compare to the site cleanup standards. The copper samples should be analyzed by ICP-MS for better detection limits in samples with potentially high salt water content.

Seep: Collect water samples from the previously sampled seep on the site at low tide for three additional quarters. The samples should be analyzed for total and dissolved copper and lead. Again, reporting limits should be low enough to compare to site cleanup standards, and the copper samples should be analyzed by ICP-MS.

I would appreciate it if you could send me results of each sample event as they become available. A short letter/report format for presenting the data at the end of sampling is acceptable to me.

Please call me if you have any questions or would like to discuss.

Sincerely,


Joyce Mercuri
Site Manager
Toxics Cleanup Program
Southwest Regional Office

JM:le(3/tcp)

cc: Mark Burley, Joseph Simon & Sons
Guy Sternal, Eisenhower & Carlson

RECEIVED

OCT 15 2001

K/J Federal Way
K/J No/File _____
Route _____
Return To/By _____



Attachment B

Analytical Reports and Chain-of-Custody Documents



SPECTRA Laboratories

2221 Ross Way • Tacoma, WA 98421 • (253) 272-4850


12/19/2001

Kennedy/Jenks
530 S. 336th st.
Federal Way, WA 98003
Attn: Dean Malte

Project: Simon and Sons (986054.00)
Client ID: IB-DEC01
Sample Matrix: Wastewater
Date Sampled: 12/18/2001
Date Received: 12/18/2001
Spectra Project: 2001120173
Spectra Number: 1

<u>Analyte</u>	<u>Result</u>	<u>Units</u>	<u>Method</u>
Copper	4	ug/L	EPA 220.2
Dissolved Copper	< 1	ug/L	EPA 220.2

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Steve Hibbs, Laboratory Manager
a6/scj

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DEC 24 2001
K/J Federal Way

Kennedy/Jenks Consultants

Client Kennedy/Jenks
Site Simon & Sons
Project No. 986054.00
Sampler Name Dean Matte
Telephone 233-874-0555
Report to Dean Matte
Company Kennedy/Jenks
Address 530 S. 36th St
Federal Way, WA 98003
Fax 233-952-3435

Lab Destination Spectra
Address 2221 Ross Way
Tacoma WA 98421
Telephone 253-272-4850

Carrier/Way Bill No. _____

- (1) Write only one sample number in each space.
- (2) Specify type of sample(s): Water (W), Solid (S), or indicate type.
- (3) Mark each sample which should be composited in 1 hour into as follows:

(4) Preservation of sample.

(5) Write each analysis requested across top. Place an "X" in appropriate column to indicate type of analysis needed for each sample.

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SPECTRA Laboratories

2221 Ross Way • Tacoma, WA 98421 • (253) 272-4850

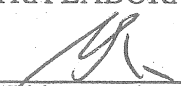
02/25/2002

Kennedy/Jenks
530 S. 336th
Federal Way, WA 98003
Attn: Dean Malte

Project: Simon & Sons
Sample Matrix: Water
Date Sampled: 02/19/2002
Date Received: 02/19/2002
Spectra Project: 2002020160

<u>Spectra #</u>	<u>Client ID</u>	<u>Analyte</u>	<u>Result</u>	<u>Units</u>	<u>Method</u>
1	IB-FEB02 (Field Filtered)	Dissolved Copper	3	ug/L	EPA 220.2
2	IB-FEB02 (Total Recoverable)	Copper	13	ug/L	EPA 220.2

SPECTRA LABORATORIES



Steve Hibbs, Laboratory Manager

a7/scj

Kennedy/Jenks Consultants

Client	Report to
Kennedy/Jenks	Dean Mactee
Site	Company
Sinclair Sons	Kennedy/Jenks
Project No.	Address
90605A-00	530 S. 32nd St
Sampler Name	Federal Hwy, WA 9800
Joel Gruntyak	
Telephone (253)	Fax
874-0555	253 952-3435

Lab Destination SPRLTPA
Address 2221 ROCKWAY
TACOMA, WA 98421
Telephone 253-272-4850
ier/Way Bill No. _____

[illegible]

- (1) Write only one sample number in each space.
- (2) Specify type of sample(s): Water (W), Solid (S), or indicate type.
- (3) Mark each sample which should be composited in Laboratory as follows: Place an "A" in box for each sample that should be composited into one sample; use sequential letter for additional groups.
- (4) Preservation of sample.
- (5) Write each analysis requested across top. Place an "X" in appropriate column to indicate type of analysis needed for each sample.

Sample Relinquished By				Sample Received By			
Print Name	Signature	Company	Date	Time	Print Name	Signature	Company
JODIE BROWN	<i>Jodie Brown</i>	Kennedy Supply	3/14/02	1:40	D. Trish	<i>D. Trish</i>	Spectra



SPECTRA Laboratories

2221 Ross Way • Tacoma, WA 98421 • (253) 272-4850


05/02/2002

Kennedy/Jenks
530 S. 336th
Federal Way, WA 98003
Attn: Dean Malte

Project: Simon & Sons 986054.00
Client ID: Seep1-Apr02
Sample Matrix: Water
Date Sampled: 04/26/2002
Date Received: 04/26/2002
Spectra Project: 2002040299
Spectra Number: 1

<u>Analyte</u>	<u>Result</u>	<u>Units</u>	<u>Method</u>
Copper	< 1	ug/L	EPA 220.2
Dissolved Copper	< 1	ug/L	EPA 220.2
Dissolved Lead	< 1	ug/L	EPA 239.2
Lead	< 1	ug/L	EPA 239.2

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Steve Hibbs, Laboratory Manager

a6/scj

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MAY 7 - 2002

K/J Federal Way
K/J No/File _____
Route _____
Return To/By _____

Client Kennedy Jenks

Site Swamp & Sows

Project No. 986054.00

Telephone 253-874-0555

Telephone

Report to Dean Wolfe

Company Keardv/Senka

Address 5305 1336th St

For 1000

Fax 253-952-3435

- (1) Write only one sample number in each space.
- (2) Specify type of sample(s): Water (W), Solid (S), or indicate type.
- (3) Mark each sample which should be composited in Laboratory as follows: Place an "A" in box for each sample that should be composited into one sample; use sequential letter for additional groups. indicate type of analysis needed for each sample.
- (4) Preservation of sample.
- (5) Write each analysis requested across top. Place an "X" in appropriate column to

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2221 Ross Way • Tacoma, WA 98421 • (253) 272-4850

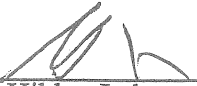
06/24/2002

Kennedy/Jenks
530 S. 336th
Federal Way, WA 98003
Attn: Dean Malte

Project: Simon & Sons
Client ID: Seep1-Jun02
Sample Matrix: Water
Date Sampled: 06/14/2002
Date Received: 06/14/2002
Spectra Project: 2002060187
Spectra Number: 1

<u>Analyte</u>	<u>Result</u>	<u>Units</u>	<u>Method</u>
Copper	3	ug/L	EPA 220.2
Dissolved Copper	< 1	ug/L	EPA 220.2
Dissolved Lead	< 1	ug/L	EPA 239.2
Lead	< 1	ug/L	EPA 239.2

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Steve Hibbs, Laboratory Manager

a6/scj



SPECTRA Laboratories

2221 Ross Way • Tacoma, WA 98421 • (253) 272-4850


08/23/2002

Kennedy/Jenks
530 S. 336th
Federal Way, WA 98003
Attn: Dean Malte

Project: Simon & Sons
Client ID: SEEP 1-Aug02
Sample Matrix: Water
Date Sampled: 08/20/2002
Date Received: 08/20/2002
Spectra Project: 2002080219
Spectra Number: 1

<u>Analyte</u>	<u>Result</u>	<u>Units</u>	<u>Method</u>
Copper	12	ug/L	EPA 220.2
Dissolved Copper	< 1	ug/L	EPA 220.2
Dissolved Lead	1	ug/L	EPA 239.2
Lead	4	ug/L	EPA 239.2

SPECTRA LABORATORIES


Steve Hibbs, Laboratory Manager
a6/scj

Kennedy/Jenks Consultants

Client Kennedy/Leahs

Report to DEAN VALTE

Site Grassland

Company Kennedy/Jenks

Project No. 796054.00

Address 5306 23rd St NW

Sampler Name CKM/1213

Florida Dept. of RA

Telephone 283-674-0505

253-952-3435

[illegible]

(1) Write only one sample number in each space.

(2) Specify type of sample(s): Water (W), Solid (S), or indicate type.

(3) Mark each sample which should be composited in Laboratory as follows: Place an "A" in box for each sample that should be composited into one sample; use sequential letter for additional groups.

(4) Preservation of sample:

(5) Write each analysis requested across top. Place an "X" in appropriate column to indicate type of analysis needed for each sample.

Sample Relinquished By				Sample Received By			
Print Name	Signature	Company	Date	Time	Print Name	Signature	Company
Donna Williams	[Signature]	R/S	9/20/04	10:20			
Kevin Mason	[Signature]	Specula	9/20/04	10:20			